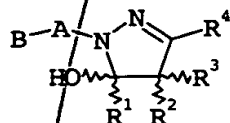


We claim;

1. The use of 5-hydroxypyrazolines of the formula I



I

10 where:

B is aryl with or without substitution or hetaryl with or without substitution;

A is C=O, C=S oder SO₂;

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R¹ is C₂-C₁₀-alkyl, C₁-C₁₀-haloalkyl, C₃-C₁₀-alkenyl, C₃-C₁₀-haloalkenyl, C₃-C₁₀-alkynyl or C₃-C₁₀-haloalkynyl,

20

C₃-C₁₀-cycloalkyl with or without substitution, C₃-C₁₀-cycloalkenyl with or without substitution, C₃-C₁₀-cycloalkynyl with or without substitution or,

25

aryl with or without substitution, heterocyclyl with or without substitution or hetaryl with or without substitution;

R² is hydrogen;

30

R³ is hydrogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, C₂-C₄-alkenyl, C₂-C₄-haloalkenyl, C₂-C₄-alkynyl or C₂-C₄-haloalkynyl, where

35

R' independently of one another are hydrogen or C₁-C₄-alkyl;

or R² and R³ together are a group

=O, =S or =N-O-R⁵, where

40

R⁵ is hydrogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₃-C₆-alkenyl, C₃-C₆-haloalkenyl, C₃-C₆-alkynyl or C₃-C₆-haloalkynyl;

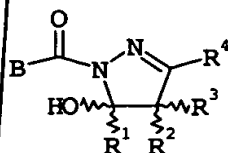
R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl, COOR', hetaryl or heterocyclyl;

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for controlling harmful fungi.

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2. A 5-hydroxypyrazoline of the formula IA as set forth in claim 1,



IA

in which in case a:

R³ is nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, C₂-C₄-alkenyl, C₂-C₄-haloalkenyl, C₂-C₄-alkynyl or C₂-C₄-haloalkynyl;

or R² and R³ together are a group

=O, =S or =N-O-R⁵,

R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl or heterocyclyl;

and B, R¹ and R² are each as defined in claim 1, or

in case b:

B is naphthyl with or without substitution, heterocyclyl with or without substitution, hetaryl with or without substitution or substituted phenyl, and

R³ is hydrogen,

R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl or heterocyclyl;

where R⁴ is not methyl if R¹ is methyl, tert-butyl or phenyl and the group B is phenyl which is substituted by 3-bromo, 4-halo, 4-methyl, 4-methoxy, 4-nitro, 4-dimethylamino or 4-fluoro-3-methyl, and

where R⁴ is not ethyl if both the group B and R¹ are 4-fluorophenyl, or

in case c:

B is unsubstituted phenyl,

R¹ is aryl with or without substitution, heterocyclyl with or without substitution or hetaryl with or without substitution,

5 C₃-C₁₀-cycloalkyl with or without substitution,
C₃-C₁₀-cycloalkenyl with or without substitution,
C₃-C₁₀-cycloalkynyl with or without substitution,

10 n-propyl with or without substitution, C₄-C₁₀-alkyl with or without substitution, CHCl₂, CH₂Cl, CCl₃, CHF₂, CF₂H, CF₂Cl, CFC1₂, C₂-C₁₀-haloalkyl, C₃-C₁₀-alkenyl with or without substitution, C₃-C₁₀-haloalkenyl, C₃-C₁₀-alkynyl with or without substitution or C₃-C₁₀-haloalkynyl;

15 R² is hydrogen;

R³ is hydrogen, nitro, cyano, amino, methylamino, dimethylamino, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, C₂-C₄-alkenyl, C₂-C₄-haloalkenyl,
20 C₂-C₄-alkynyl or C₂-C₄-haloalkynyl,

or R² and R³ together are a group

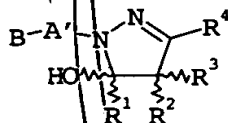
=O, =S or =N-O-R⁵, and

25 R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl or heterocyclyl;

30 where R¹ is not tert-butyl if R⁴ is CF₂H and R⁴ is not methyl if R¹ is phenyl.

3. A 5-hydroxypyrazoline of the formula IB as set forth in claim 1,

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IB

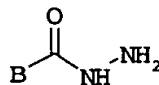
in which

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A' is C=S or SO₂.

4. A process for preparing compounds of the formula IA as claimed in claim 2, which comprises reacting a hydrazine of the formula II,

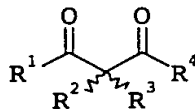
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II

5 in which B is as defined in claim 2,

with a diketone of the formula III,

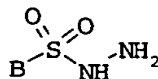


III

10 in which the substituents are each as defined in claim 2.

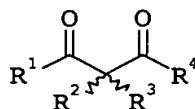
5. A process for preparing compounds of the formula IB as
15 claimed in claim 3, in which A' is C=S, which comprises
reacting compounds of the formula I as set forth in claim 1,
in which A is C=O, with Lawesson's reagent.

6. A process for preparing compounds of the formula IB as
20 claimed in claim 3, in which A' is SO₂, which comprises
reacting sulfohydrazines of the formula IV,



IV

25 in which B is as defined in claim 1 with diketones of the
formula III,



III

30 in which the substituents are each as defined in claim 1.

7. The use of compounds of the formula I as set forth in claim
35 1, in which A is C=O, as intermediates for preparing
compounds of the formula IB as claimed in claim 3 in which A'
is C=S.

8. A composition which is suitable for controlling harmful
40 fungi, comprising a solid or liquid carrier and a compound of
the formula I as set forth in claim 1.

9. The use of the compounds I as set forth in claim 1 for
45 preparing a composition which is suitable for controlling
harmful fungi.

10. A method for controlling harmful fungi, which comprises
treating the fungi or the materials, plants, the soil or the
seeds to be protected against fungal attack with an effective
amount of a compound of the formula I as set forth in claim
1.

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